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Neurodevelopmental Disorders. Changes in the Theoretical and Diagnostic Approach

ABSTRACT

For the sake of diagnosis and therapy, there were created medical typologies of worldwide range, among which the most recognized and commonly used are ICD (International Statistical Classification of Diseases and Related Health Problems) and DSM (Diagnostic and Statistical Manual of Mental Disorders) of which new editions are the subject of interest to the authors.

This article points out the global trends and directions of changes that occur throughout the area of terminology and categorization of mental development disorders (neurodevelopmental) and associated with them Developmental Language Disorders (DLD). The work presents and refers to the proposals of changes, which are planned by WHO in the latest, eleventh edition of international classification of diseases and mental disorders ICD, that will be in force in Poland from 1 January 2022. There is also made an attempt to show how the terminology has been changing over the past 25 years and what changes are currently being made in this field; how the development of knowledge and social awareness impacted the revision of the theoretical approach and nomenclature. It was possible by the detailed analysis of the older and new editions of abovementioned ICD and DSM typologies, that is: DSM-IV from 1994 and 2000, DSM-5 (from 2013), ICD-10 (released in 1996) and ICD-11 (from 2019). In the table placed in the final part of the article (which is modified version of the table published by Jastrzębowska in 1999, supplemented with new changes proposed by WHO and the American Association of Psychiatrists) it is indicated how the theoretical approach has evolved in relation to mental disorders and behaviour, and as a consequence, how the names of speech and language development disorders created on this background have changed. This table compares the native terminology with the one that is currently in force in ICD-10, DSM-IV and DSM-5, and it refers to the names of categories and clinical units distinguished in the new, eleventh edition of ICD. In order to make comparison and accurately evaluate the described phenomena, this collation has been complemented with a detailed description of diagnostic criteria proposed in ICD-11 and DSM-5.

Keywords: international medical classifications DSM, ICD, mental development disorders, neurodevelopmental disorders, language development disorders, language and speech development disorders

INTRODUCTION

Over the time, due to the development of medical sciences, there has been observed the change in perspective and theoretical approach to the central issue, etiopathogenesis, as well as the impact of mental disorders on human development and functioning. This is reflected in evolving terminology and altering divisions. Along with the increase in knowledge, the public awareness of the consequences they bring has been also increasing. Conducted research as well as doctors, geneticists and psychologists reports have proven:

- much broader spectrum of influence of mental development disorders on social functioning and individual's behavior than previously thought,
- that the symptoms of mental disorder do not only apply to the psyche but have more vast consequences,
- accompanying dysfunctions and additional difficulties blur the boundaries between distinct clinical units and make diagnosis tough,
- the same symptoms of language behavior disorders (e.g. pragmatics, semantics) are observed in different types of neurodevelopmental disorders.

In the latest editions of ICD and DSM, the above arrangements have resulted in changes in the structure, interpretation and terming of mental development disorders; walking out of creating new nosological units towards the description of symptom sets, taking into consideration their severity and consequences. The new, holistic view of the development process and the subsequent changes in the methodological approach, definitely gave them the character of symptomatic classifications. In the absence of comprehensive data on the etiopathogenesis and pathomechanism of neurodevelopmental disorders, this course of changes finds theoretical justification. The interdependence and interfusing of mental development disorders of the individual and consequences that are difficult to predict, additionally hinder the assessment, diagnosis and, as a result, the categorization of these phenomena. This relationship is manifested in various ways and aspects of life. Goodman and Scott (2000) assess the significance and strength of this impact by analyzing the well-being (occurrence of child's mental discomfort) and the occurrence of disturbances in such areas of the individual's activity as:

- social functioning (family life, school achievements, intra- and interpersonal relations),
- ways of free time spending,
- functioning in the environment.

The research approach, which take into account the impact of the occurring disorder on the further development of the individual, on its social and emotional functioning – is a significant qualitative change.

Thanks to the ICD, created for the World Health Organization (WHO), which has been improved for years, currently the recognition and diagnosis of disorder has become easier and more structured. The efforts made by WHO to unify the names, as well as the development of strictly defined standards of diagnostic proceeding (procedures, group or disorder category inclusion and exclusion criteria) enabled the assessment, classification of phenomena, comparison of test results and exchange of experience.

Reviewing the new WHO proposals regarding rearrangement, different division of diseases and health problems, as well as their terming, one can see a turn towards an in-depth description of disorders, a detailed description of symptomatic syndromes - their distinct variants, considering the severity of symptoms and the overall functioning of the individual. The change in the theoretical approach is reflected in the number of diseases and disorders distinguished in ICD-11, descriptive names of units (as in the case of autism spectrum disorders) and reformulated diagnostic criteria. These measures are intended to facilitate diagnosis and reduce the number of units included in the subgroup *other disorders*, *unspecified.*

The changes designed in ICD-11 and introduced in DSM-5 relate also to terminology embracing those terms related to neurodevelopmental disorders (and also included in that group *communication disorders* – DSM-5, while in ICD-11 called *speech* or *language disorders*). What it is known about them is: (1) their etiology is unknown, (2) the course and consequences depend on the combination of genetic and environmental influences, (3) central nervous system dysfunction results in, among others disorders, acquiring language competence disorder, followed by various fixed forms of language behaviour disorders impeding communication. Communication disorders are therefore one of the most important diagnostic criteria for neurodevelopmental disorders in ICD-11, while in DSM-5 – a separate category.

While analysing the descriptions, criteria and diagnostic guidelines for neurodevelopmental language disorders contained in ICD-11 (which are discussed later in this article), two perspectives for the assessment of phenomena are clearly visible: (1) the course of the development of language expression and perception, (2) the level of development of individual aspects of speech (articulation, speech fluency) and language fields (phonology, semantics, pragmatics) in relation to age and developmental norms. Both relate to the process of language acquisition and developing the skills to use the acquired competences. In children with DLD and a pure form of DLD (with SLI), these processes may be delayed in time, at a dif-

ferent pace and rhythm, and the achievements may significantly differ in quantitative or/and qualitative form from peers' achievements and differ from the skills of younger, properly developing children. Therefore, the delay in development in ICD-11 was recognized as the most important symptom of neurodevelopmental language disorders. Based on strictly defined quantitative and qualitative criteria, various symptoms of speech development delay are assessed there: from the number of words used and understood, to the quality of formulated statements and communication abilities. The course and level of language development are analysed in relation to the age group. With this approach, the term *speech development delay* used by Polish speech therapists – ORM (*delayed speech development / delayed language development*) in the meaning of the name for the diagnosis, becomes synonymous with the term *developmental language disorder*. And as the name of the symptom it is useful for descriptive purposes but loses its sense in the case of diagnosis. ORM is diagnosed in most cases of developmental disorders.

Despite the passage of years, the phenotype of such disorders as SLI, autism, Asperger syndrome has not yet been determined. The lack of arrangements regarding etiopathogenesis imposes a change in their categorization. That is why currently the concept of isolating nosological units, which are diagnosed only on the basis of exclusion criteria, i.e. only after eliminating all possible causes of a serious delay in language acquisition and developing communication skills (Jastrzębowska, 2017: 545). When the observed symptoms do not entitle to make an unambiguous diagnosis (the disorder does not meet the criteria of any nosological units listed in the classification), it still belongs to the *unspecified disorders*. The changes in the diagnostic approach, quitting the diagnosis excluding a given disorder in the direction of searching for criteria including them into a particular category may work good in the field of adjudications in health centres, clinics and in therapy planning.

Summing up, the new trends in theoretical and diagnostic approach to neurodevelopmental disorders are discussed in this article. It relates to the changes in terminology and also to the differences between native logopedic terminology and the one used worldwide. The tabular summary, which is presented in the final part of this study, makes such opportunity – it is possible to compare the names of categories and nosological units used in Poland which are distinguished in subsequent editions: DSM-IV (1992), DSM-5 (2013), ICD-10 (1996) and ICD-11 (2019). The introduced passages of ICD-11 (https://icd.who.int/en/; authors' own translation) allow to familiarize with standards that will become effective in Poland from January 1, 2022. However, this constituent is for reference only and its purpose is to estimate the upcoming changes and diagnostic forecasts. The classifications which currently are in force in Poland are DSM-5 and ICD-10. Only

these should be taken into account while choosing current means of description and while making diagnosis.

The most important information about discussed classification is presented below in Table 1. As distinct from ICD, DSM classification includes only the description of mental disorders, while ICD is the repertory of all diseases and health problems and mental disorders occupy one of many chapters.

Table 1. Characteristics of the international DSM-5, ICD-10 and ICD-11 classifications

Classification	DSM-5	ICD-10	ICD-11
Full name	Diagnostic and Statistical Manual of Mental Disorders	International Statistical Classification of Diseases and Related Health Problems	International Statistical Classification of Diseases and Related Health Problems
Issuing authority	American Psychiatric Association	World Health Organization	World Health Organization
Date of effect in Poland	From 18.05.2013 – till now	01.01.1996–31.12.2021	From 01.01.2022
Coding type	Numeric + descriptive	alphanumeric	alphanumeric

Note. Own elaboration based on data published by WHO at https://icd.who.int/en/ (WHO, 2019).

LANGUAGE DISORDERS IN THE LIGHT OF DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (DSM-IV AND DSM-5) BY THE AMERICAN PSYCHIATRIC ASSOCIATION

Diagnostic and Statistical Manual of Mental Disorders (DSM) is a classification of mental disorders developed by American Psychiatric Association in the 1950s. The first edition (DSM-I) was published in Washington in 1952, while subsequent II, III, IIIR, IV, IVTR and 5 in: 1968 (DSM-II), 1980 (DSM-III), revision of the third version in 1987 (DSM-IIIR), 1994 (DSM-IV), revision of the fourth version in 2000 (DSM-IVTR) and the current version that was published in 2013.

Five years after the fourth edition of DSM, i.e. in 1999, in the first edition of academic textbook called *Logopedia – pytania i odpowiedzi…*, edited by Gałkowski and Jastrzębowska, in Table 5.4 by Jastrzębowska (1999: 354–358) the terminology used in medical classifications ICD-10 and DSM-IV was presented for the first time on the basis of Polish speech therapy (DSM-IV text was not available at that time to Polish speech therapists) and the native terminology

was compared with terms for speech and language disorders used in the world (Dżaluk, 2019).

In view of the topic of this article and the purpose of demonstrating the changes in the field of terminology, the last editions of DSM: DSM-IV and DSM-5 were analysed in their parts concerning communication disorders. Presented below passage of the fourth DSM edition constitutes the mutual supplementation of two versions: DSM-IV (1994) and the revision of fourth edition DSM-IVTR (2000).

In DSM-IV, as distinct from DSM-5, there were included five dimensions of classifying disorders (called "axes") which enable to diagnose the disease, predict its course and also plan the therapeutic proceeding. They were:

Axis I – describing clinical disorders

Axis II – describing personality disorders and developmental disorders

Axis III – describing general medical conditions

Axis IV – describing psychosocial and environmental problems

Axis V – describing the level of adjustment (Wciórka, 2008).

On the other hand, in DSM-IV (1994) and DSM-IVTR (2000) there were distinguished as many as 11 groups of mental disorders recognised at the different stages of human development (Wciórka, 2008).

The superior group for the communication disorders is constituted by: *Mental disorders beginning mainly in the childhood or adolescence* (American Psychiatric Association, 1994). They include: phonological disorder, mixed receptive-expressive language disorder, and non-specific communication disorder (Jastrzębowska, 1999). When intimately analysing the inclusion criteria for a given group and diagnostic unit, there were distinguished the following types of communication disorders:

Expressive language disorder (315.31) which is manifested by clinical symptoms including: clearly limited vocabulary, dysgrammatisms, difficulties in remembering or recalling words (in the so-called verbal readiness), problems with uttering sentences of appropriate length or complexity suitable to the age (American Psychiatric Association, 1994; Jastrzębowska, 1999: 355).

Mixed receptive-expressive language disorder (315.32) in which the elementary diagnostic criterion is the fact that the results of standardized individual measurements of the development of receptive and expressive speech are undeniably lower than the results of standardized measurements of the development of nonverbal abilities. Besides the delay in speech development, they include symptoms characteristic for language expression disorders and, additionally, difficulties in understanding words, sentences or certain types of words, such as spatial terms (American Psychiatric Association, 1994; Jastrzębowska, 1999: 356).

Phonological disorder (315.39) this is manifested by impairment in the use of anticipated age-appropriate developmental speech sounds. These disorders relate

to mistakes in phonological production (articulation), the use of sound, representation or organization (exchange of sounds, their abandonment) (American Psychiatric Association, 1994; Jastrzębowska, 1999: 355).

Stuttering (307.0) is defined as a disturbances in the normal fluency and length of utterance (not appropriate for the age of the given person). It is characterized by frequent occurrences of one or more symptoms, such as: repetitions of sounds and syllables, sounds prolongations, breaks in words (so-called strained pauses, or not strained pauses), audible or silent blocking (filled or unfilled pauses in speech), circumlocutions (substituting other words or using extensive descriptions), words produced with excessive muscular tension, monosyllabic repetitions of whole words (American Psychiatric Association, 1994).

Above-mentioned disorders meet the basic criteria including in the group of *mental disorders beginning mainly in childhood or adolescence*: (1) These disorders cause problems in learning, working life and social contacts. (2) Criterion validity allows to disqualify interrelationships with another disorder and to fully exclude holistic developmental disorders. (3) If language development disorders are accompanied by mental retardation, sensory-motor disorders, or there is a suspicion of the deprivation in the environmental sphere, then the difficulties in a given field (here: the language disorders) can reach a much greater intensity, in comparison to the cases with the absence of these additional variables (American Psychiatric Association, 1994). In DSM-IV, the category: *Communication disorders not otherwise specified – NOS (307.9)* was also distinguished. It includes speech disorders that do not meet the abovementioned criteria; when communication disorders appear for example as a result of voice disorders (unnatural pitch, loudness, quality or tone, or resonance) and they cannot be explicitly classified into any of the foregoing diagnostic categories (Jastrzębowska 1999: 357).

Developing disciplines, categorized as neuroscience, evolving of more and more excellent techniques, diagnostic tools, as well as multiple reports from research and clinicians accounts, indicated the elaborateness of mental disorders, their interrelationships and wider than expected consequences. Because of the current condition of knowledge, the diagnostic criteria used in DSM-IV have become insufficient for classifying the phenomena that were mentioned in it, including communication disorders. The problems with the assignment of the observed symptoms to individual disease entities appeared, and thus the breakthrough occurred. Again, the need to revise the DSM was recognized, changes having regard to the latest scientific achievements had to be made. This led to the release of the next edition marked with the abbreviation DSM-5.

In the new, fifth version of DSM, except from abandoning the axial character of describing the disorder, several other significant changes were introduced. *Communication disorders* are placed in a comprehensive category of *neurodevel-*

opmental disorders. Communication disorders involve, among others: *language disorder, speech sound disorder, childhood-onset fluency disorder (stuttering), social communication disorder and unspecified communication disorders* (Gałecki, Święcicki, 2015).

The first subgroup of *communication disorders* distinguished in the DSM-5 classification is *language disorder (315.32)*, which is characterized by persistent difficulties in the acquisition and use of language in various forms - spoken, written, read. Such a person is distinguished by deficits in the stock of dictionary, both active and passive. Additionally, this person has problems in the grammatical scope of the language and has defective ability to conduct a conversation. In terms of communication and participation in social interactions, a significant difference is observed when compared with peers. These people show substantial communication difficulties at school and in working life (American Psychiatric Association, 2013).

Speech sound disorder (315.39) is the second type of communication disorders mentioned in DSM-5. Persistent difficulties in speech sounds production are characteristic for this disorder, which unable proper communication with the environment (American Psychiatric Association, 2013).

The following diagnostic unit is constituted by *social communication disorder*. This is characterized by persistent problems in verbal and non-verbal communication. It causes deficits in social contacts, spoils the ability to communicate both as a listener and a speaker. People with such a diagnosis have problems when choosing the verbal content to the context of the utterance. They are not able to stick to socially accepted rules of conversation, they are also unable to draw appropriate conclusions from the content and context of utterance (American Psychiatric Association, 2013). As in previous versions of the DSM classification, what connects the above diagnostic categories is reported by patients difficulties in social contacts, at school or in professional life. The symptoms appear at an early stage of development. Moreover, other possible sources of the problem are excluded (Dżaluk, 2019).

The last mentioned unit in this group is *unspecified communication disorder (307.9)*. The diagnosis is made when symptoms obviously inhibit the patient's life and are the source of patient's suffering in social sphere, professional sphere or both. However, these symptoms do not meet any other diagnostic criteria, and other sources of patient's health state are disqualified, including neurodevelopmental disorders (American Psychiatric Association, 2013)

Compering the terminology used in DSM-IV and changes in terminology which were made in the new, fifth edition of this classification – it was determined that there were no significant alterations in the terminology used in scope of communication disorders. Simply, the phonological disorder turned into a speech

sound disorder. In terms of coding of disease entities, codes derived from the ICD-9 classification still apply. Only the axial description method of the disorder used in DSM-IV was rejected. Numerous corrections have been implemented into the description of symptoms, the new types of disorders have been added, and some criteria have been removed (American Psychiatric Association, 2013).

LANGUAGE DISORDERS IN THE LIGHT OF INTERNATIONAL STATISTICAL CLASSIFICATION OF DISEASES AND RELATED HEALTH PROBLEMS ICD-10 AND ICD-11

International Statistical Classification of Diseases and Related Health Problems was established on commission of World Health Organisation and it presents the international system of nosological diagnosis.

The tenth edition of this classification, known as ICD-10, has been in force in Poland from 1996 to the present. At the moment, the International Classification of Diseases, Clinical Modification ICD-9-CM is used to describe medical procedures, while the ICD-10 International Statistical Classification of Diseases and Related Health Problems is used to qualify afflictions and diseases. On June 18, 2018, WHO presented the new version of the International Statistical Classification of Diseases and Related Health Problems marked with number eleven (ICD-11). The electronic version of this classification, already published and available in the English-language version, is intended to familiarize diagnosticians from member states of WHO with the introduced changes. Finally, the eleventh edition of the ICD will be in force in Poland from January 1, 2022. In comparison to ICD-10, which contained less than 14.5 thousand of codes denoting disease entities, ICD-11 has as many as 55 thousand (https://icd.who.int/en/). There have also appeared modifications in the coding system. Preparations for the introduction of the new edition comprise consultations on new proposals, including rearrangement and dissimilar division of some diseases and health problems. They are compliant with existing research results and findings in the field of medicine, psychiatry, biology, genetics and many others (*WHO wprowadza nową klasyfikację chorób ICD 11*, n.d.).

Included in the International Statistical Classification of Diseases and Related Health Problems ICD-10*,* speech and language disorders which cause communication disorders fall into the superior category: *mental development disorders.* They consist of *specific developmental disorders of speech and language* described with the code F80. These contain such subtypes of disorders as: *specific speech articulation disorder (F80.0)*; *expressive language disorder (F80.1)*; *receptive language disorder (F80.2)*; *acquired aphasia with epilepsy (F80.3)*; *other developmental disorders of speech and language (F80.8)* and *developmental*

disorder of speech and language, unspecified (F80.9). Additionally, there is also code F82 which refers to *specific developmental disorder of motor function* that is crucial from speech therapy perspective because in most cases, together with delay in motor sphere, there occur difficulties in speech (Jastrzębowska, 2003). On the other hand, highlighted there *mixed specific developmental disorders* (F83) involve problems revealing in several spheres of individual's functioning. Thus, they weaken its cognitive abilities and contribute to delay in the language sphere. This group of mental development disorders embraces also *pervasive developmental disorders* marked with the code (F84), whose complexity and intensity, but also often unclear criteria distinguishing the phenomena counted in this category, are problematic in the face of the need to make an accurate diagnosis (Międzynarodowa Statystyczna…, 1998).

The new, eleventh edition of ICD classification introduces a great deal of changes, concerning also disorders which are important from logopaedic point of view. In chapter six, concerning, among others, communication disorders, the following division is applied:

"CHAPTER 6. Mental, behavioural or neurodevelopmental disorders":

Neurodevelopmental disorders (6A0)

6A00 Disorders of intellectual development;

6A01 Developmental speech or language disorders;

6A02 Autism spectrum disorder;

6A03 Developmental learning disorder;

6A04 Developmental motor coordination disorder;

6A05 Attention deficit hyperactivity disorder;

6A06 Stereotyped movement disorder;

6A0Y Other specified neurodevelopmental disorders;

6A0Z Neurodevelopmental disorders, unspecified (https://icd.who.int/en/).

Within the group of neurodevelopmental disorders (6A0) a superior group is distinguished, called *developmental speech or language disorders* (6A01). They are marked by difficulties in understanding or producing speech or in the use of language for communication purposes, that go beyond the borders of normal deviation expected for the age and level of intellectual functioning of the individual. The observed speech and language problems are not associated with social or cultural factors (e.g. regional dialects) and are not fully clarified by anatomical or neurological abnormalities. The probable etiology of developmental speech or language disorders is complicated, and in many singular cases is unidentified (https://icd.who.int/en/).

Developmental speech sound disorder (6A01.0) – (in Polish terminology *specific speech articulation disorder*) that is marked by difficulties in the process of speech acquisition, production and perception, what cause errors of pronun-

ciation, either in amount or sorts of speech errors made or the general quality of speech production. They go outside the boundaries of normal variation anticipated for age and level of intellectual functioning. It leads to reduced intelligibility and significantly influence communication. The mistakes in pronunciation arise during the early developmental period and cannot be explained by social, cultural, and other environmental deviations. In addition, the speech disorders are not fully explained by a hearing impairment or a structural or neurological abnormality (https://icd.who.int/en/).

Developmental speech fluency disorder (6A01.1) – (in Polish terminology *developmental speech inarticulacy*) is marked by tenacious and often or pervasive disturbance in the rhythmic stream of speech that occurs during the developmental period. It goes outside the boundaries of normal variation anticipated for age and level of intellectual functioning. It leads to reduced intelligibility and significantly influences communication. It may embrace replications of sounds, syllables or words, prolongations, word breaks, blockage of speech production, excessive use of interjections, and fast short bursts of speech (https://icd.who.int/en/).

Developmental language disorder (6A01.2) – (in Polish terminology *developmental language disorder*) that is marked by tenacious difficulties in the acquisition, understanding, production or the use of language (spoken or signed). It occurs during the developmental period, characteristically during early childhood, and cause important limits in the individual's ability to communicate. The ability to understand, produce or use language is decidedly lower than what would be anticipated for the individual's age and level of intellectual functioning. The language deficits are not explained by another neurodevelopmental disorder, sensory impairment or neurological condition, containing the effects of brain injury or infection (https://icd.who.int/en/).

Developmental language disorder with impairment of receptive and expressive language (6A01.20) – (in Polish terminology *developmental language disorder – mixed form, receptive-expressive*) that is marked by tenacious difficulties in the acquisition, understanding, production, and use of language. They occur during the developmental period, characteristically during early childhood, and cause important limits in the individual's ability to communicate. The ability to understand spoken or signed language (i.e. receptive language) is decidedly lower that the anticipated level for the individual's age and level of intellectual functioning. This disorder goes with tenacious impairment in the ability to produce and use spoken or signed language (i.e. expressive language) (https://icd.who.int/en/).

Developmental language disorder with impairment of mainly expressive language (6A01.21) – (in Polish terminology *developmental language disorder – expressive form*) is marked by tenacious difficulties in the acquisition, production, and use of language. It occurs during the developmental period, characteristically

during early childhood, and cause important limits in the individual's ability to communicate. The ability to produce and use spoken or signed language (i.e. expressive language) is decidedly lower than the anticipated level for the individual's age and level of intellectual functioning. It is also characterised by the fact that despite remaining difficulties, the ability to understand spoken or signed language (i.e. receptive language) is relatively unimpaired (https://icd.who.int/en/).

Developmental language disorder with impairment of mainly pragmatic language (6A01.22) – (in Polish terminology *higher-order disorders*; *semantic and pragmatic disorders*) is marked by tenacious and clear difficulties with the understanding and use of language in social contexts. For instance, such an individual has problems with making inferences, understanding verbal humour, and resolving ambiguous meaning. These difficulties occur during the developmental period, classically during early childhood, and cause important limits in the individual's ability to communicate. Pragmatic language abilities are decidedly lower than the anticipated level for the individual's age and level of intellectual functioning. However, the other elements of receptive and expressive language are comparatively intact. This category should not be used if the pragmatic language impairment is better described by Autism Spectrum Disorder or by impairments of other elements of receptive or expressive language (https://icd.who.int/en/).

Developmental language disorder, with other specified language impairment (6A01.23) – (in Polish terminology *other, unspecified language development disorders*) is marked by tenacious difficulties in the acquisition, understanding, production or use of language (spoken or signed). It occurs during the developmental period and cause significant limitations in the individual's ability to communicate. Furthermore, the pattern of specific deficits in language abilities is not appropriately depicted by any of the other developmental language disorder classes (https://icd.who.int/en/).

In addition, there are distinguished *other specified developmental speech or language disorders* (6A01.Y) and *Developmental speech or language disorders, unspecified* (6A01.Z) (https://icd.who.int/en/). These two categories probably correspond to *Developmental disorder of speech and language, unspecified* (F80.9) which is included in ICD-10 (1996).

The terminology of disorders presented in ICD-11 (2019) differs from the one contained in ICD-10 (1996). The introduction of numerous substantial changes may result in the emergence of further difficulties in the assessment and diagnosis of these phenomena. The example of new theoretic approach, changes in terminology and neurodevelopmental disorders classification in ICD-11 may be constituted by autism and Asperger's syndrome. In the place of these two diagnostic units, one main category was created – autism spectrum disorder, which was described in 7 various variants, taking into consideration the level of cognitive

processes, mainly intellect and language, which is shown in the following passage of ICD-11 classification:

6A02 Autism spectrum disorder;

6A02.0 Autism spectrum disorder without disorder of intellectual development and with mild or no impairment of functional language;

6A02.1 Autism spectrum disorder with disorder of intellectual development and with mild or no impairment of functional language;

6A02.2 Autism spectrum disorder without disorder of intellectual development and with impaired functional language;

6A02.3 Autism spectrum disorder with disorder of intellectual development and with impaired functional language;

6A02.4 Autism spectrum disorder without disorder of intellectual development and with absence of functional language;

6A02.5 Autism spectrum disorder with disorder of intellectual development and with absence of functional language;

6A02.Y Other specified autism spectrum disorder;

6A02.Z Autism spectrum disorder, unspecified (*Nowe ICD 11 (w przygotowaniu, niezatwierdzone) proponuje inną klasyfikację spektrum autyzmu*, n.d.).

Table 2 presents the comparison of terms for various forms of neurodevelopmental disorders which occur in subsequent editions of ICD, DSM and Polish literature.

Table 2. Changes in the area of terminology of mental development disorders made in subsequent editions of international medical classifications DSM and ICD. Making reference of terms used in worldwide literature to Polish terminology

Polish terminology	DSM IV/TR	DSM 5	ICD-10	ICD-11
Zaburzenia rozwoju psychicznego / zaburzenia rozwojowe / zaburzenia neurorozwojowe	Mental disorders beginning mainly in the childhood or teenage years	Neurodevelopmental Disorders	Disorders of psychological development	Neurodevelopmental disorders (6A 0)
I. Specyficzne zaburzenia rozwoju mowy i języka (syn.: zaburzenia rozwoju języka; pierwotne zaburzenia rozwoju językowego)	I. Communication disorders	I. Communication Disorders	I. Specific developmental disorders of speech and language (F80)	I. Developmental speech or language disorders (6A 01)

Table 2. Continued

Specyficzne zaburzenia artykulacji (syn.: dyslalia centralana, ośrodkowa; zaburzenia fonologiczne)	Phonological disorder (315.39)	Speech sound disorder (315.39)	Specific speech articulation disorder (F80.0)	Developmental speech sound disorder (6A01.0) Including: speech articulation disorder
Rozwojowe zaburzenia języka	–	Language Disorder (315.32)	–	Developmental language disorder (6A01.2)
Rozwojowe zaburzenie języka, postać recepcyjno-ekspresyjna	Mixed receptive-expressive language disorder (315.32) (DSM-IV2TR) Mixed receptive-expressive language disorder 315.32)	–	Receptive language disorder (F80.2)	Developmental language disorder with impairment of receptive and expressive language (6A01.20)
Rozwojowe zaburzenie języka – postać ekspresyjna	Expressive language disorder (315.31)	–	Expressive language disorder (F80.1)	Developmental language disorder with impairment of mainly expressive language (6A01.21)
Rozwojowe zaburzenie języka typ: zaburzenia wyższego rzędu; zaburzenia semantyczne i pragmatyczne	–	Social (Pragmatic) Communication Disorder (315.39)	–	Developmental language disorder with impairment of mainly pragmatic language (6A01.22)
Inne, nieokreślone zaburzenia rozwoju językowego	–	–	–	Developmental language disorder, with other specified language impairment (6A01.23)

Table 2. Continued

Jąkanie wczesnodziecięce	Stuttering (307.0)	Childhood Onset Fluency Disorder (Stuttering) (315.35)	Stuttering (stammering) (F98.5)	Developmental speech fluency disorder (6A01.1)
II. Rozległe (globalne, całościowe) zaburzenia rozwojowe	II. Pervasive developmental disorder	II. Global Developmental Delay (315.8)	II. Pervasive developmental disorders (F84)	II. Neurodevelopmental disorders (6A0)
Autyzm	Autistic disorder (299.0)	Autism Spectrum Disorder (299.00)	Childhood autism (F84.0) Atypical autism (F84.1)	Autism spectrum disorder (6A02)
Specyficzne zaburzenia w nauce czytania i pisania (dysleksja rozwojowa)	Learning disorder (315.2/4/9)	Specific learning disorder (315.00/2/1)	Specific developmental disorders of scholastic skills (F81)	Developmental learning disorder (6A03)
III. Zaburzenia rozwoju motorycznego	III. Motor skills disorders – Developmental Coordination Disorder (315.4)	III. Developmental coordination disorder (315.4)	III. Specific developmental disorder of motor function (F82)	III. Developmental motor coordination disorder (6A04)
IV. Złożone, sprzężone zaburzenia rozwojowe	–	IV. Other specified neurodevelopmental disorder (315.8)	IV. Mixed specific developmental disorders (F83)	–
V. Zaburzenia w funkcjonowaniu emocjonalnym i społecznym	V. Other disorders of infancy, childhood, or adolescence	V. Anxiety disorders	V. Behavioral and emotional disorders	V. Anxiety or fear-related disorders
Mutyzm	Selective mutism (313.23)	Selective mutism (312.23)	Elective mutism (F94.0)	Selective mutism (6B06)
–	–	–	Other developmental disorders of speech and language (F80.8)	Other specified developmental speech or language disorders (6A01.Y)

Table 2. Continued

VI. Nieokreślone zaburzenia komunikacji	VI. Communication disorder NOS (307.9)	VI. Unspecified Communication Disorder (307.9)	VI. Developmental disorder of speech and language, unspecified (F80.9)	VI. Developmental speech or language disorders, unspecified (6A01.Z)

Note: Grażyna Jastrzębowska, Elżbieta Dżaluk: based on data published on the website of the World Health Organization https://icd.who.int/en/ (WHO, 2019) and the publication *Logopedia - questions and answers*. Academic handbook, edited by T. Gałkowski, G. Jastrzębowska, ed. I, 1999, pp. 354–358.

To sum up, the dependence and interpenetration of mental disorders and in the result their multiformity intensify the difficulty of assessing these phenomena. In the 21st century, they started to be perceived holistically, from different theoretical perspectives what is also reflected in the changes in the new editions of ICD and DSM classifications, which evidently indicate the trend of branching off from creating subsequent nosological units towards the description of descriptive names. Introduced changes relate not only to nomenclature, but also to the diagnostic standards.

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